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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/524,599
Filing Date: September 22, 2005
Appellant(s): BREITENBACHER ET AL.

Gerard A. Messina
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/14/10 appealing from the Office
action mailed 12/02/09.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

- Claims 14 and 16-46 are rejected and pending in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5,388,896	HARTMANN ET AL.	02-1995
6,030,055	SCHUBERT	02-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 14 and 16-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (USP 5388896) in view of Schubert (USP 6030055).

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Re: claim 14, Hartmann shows a method for braking two wheels of a vehicle, as in the present invention, comprising: linking a first value of a first brake pressure in a first wheel-brake cylinder allocated to a first wheel 50 of the two wheels with a second value of a second brake pressure in a second wheel-brake cylinder allocated to a second wheel 50 of the two wheels, wherein the linking is given on the basis of hydraulic pressures at respective intake valves including a first intake valve 5a and a second intake valve 5b, as stated in the Abstract wherein the pressures of the two valves are employed in the controlling method. Hartman shows in column 3, lines 24-45, that when a pressure in a front wheel brake is suddenly dropped, said front wheel is designated as a regulated wheel and the dropped pressure is being set as a first pressure for the second pressure to be determined from; wherein the controlled wheel is a rear wheel or an opposite front wheel. Hartman further discusses the relationship between controlling the pressures of the valves in column 4, lines 40-59. Hartman discusses controlling the pressures of the front brakes from right to left in the Abstract. In the body of the patent, Hartman further discusses the controlling of the pressure of the rear in comparison to the front. In other words, the valves are being adjusted in relationship with one another or the second pressure is adjusted according to a first pressure in the same manner as Applicant. All of these adjusted pressures are desirable because they are adjusted to provide stability to the vehicle on a slip road. Hartmann lacks the concept of employing a differential pressure in the first intake valve and in the second intake valve in the controlling method. Schubert teaches the concept of employing a differential pressure in an intake valve in a control method instead of

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using pressure values in order to increase accuracy in a pressure controlling method in column 1, lines 47-end. Schubert further shows the characteristics curves in figures 6a and 6b, for differential pressure in relationship with current in order to determine the current from the differential pressure and vice versa. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Hartmann's method to employ the differential pressure of an intake valve in a controlling method as taught by Schubert instead of using pressure values in order to increase accuracy in a pressure controlling method. As modified, Hartmann's method would be employing characteristic curves as taught by Schubert for the first and the second intake valves in order to increase accuracy in the controlling method in the same manner for both valves. As such, the current of each valve can be determined from the characteristics curves as shown by Schubert. Schubert also shows in column 1, lines 47-54 that the currents are activation currents for outputting signals to generate pressures as shown in figure 3.

Re: claims 16-19, Schubert further teaches the concept of using characteristic curves of differential pressure versus current in controlling the intake valve in figures 6a and 6b. As modified by Schubert, Hartmann's method would be employing characteristic curves as taught by Schubert for the first and the second intake valves in order to increase accuracy in the controlling method.

Re: claim 20, Hartmann further teaches the concept of setting a limit in the difference between the pressures of the intake valves 5a, 5b in the Abstract, lines 4-7.

Re: claim 21, Hartmann teaches the step of the linking indicates a difference between the first pressure and the second pressure. As modified by Schubert, Hartmann's method would comprise the step of indicating a difference between the first pressure differential and the second pressure differential.

Re: claims 22 and 23, Hartmann further teaches the concept of taking into consideration the vehicle speed and transverse acceleration in the controlling scheme in controlling the two wheels 5a and 5b which belong to the same axle as stated in the Abstract.

Re: claims 28 and 41-46, Schubert teaches all the combinations of the pressures versus the currents in the characteristic curves as shown in figures 6a and 6b.

Re: claim 24, Hartman shows a device for braking two wheels of a vehicle, as in the present invention, comprising: a logic arrangement for linking a first value of a first brake pressure in a first wheel-brake cylinder allocated to a first wheel 50 of the two wheels with a second value of a second brake pressure in a second wheel-brake cylinder allocated to a second wheel 50 of the two wheels, wherein the linking is given on the basis of hydraulic pressures at respective intake valves including a first intake valve 5a and a second intake valve 5b, as stated in the Abstract wherein the pressures of the two valves are employed in the controlling device. Hartman shows in column 3, lines 24-45, that when a pressure in a front wheel brake is suddenly dropped, said front wheel is designated as a regulated wheel and the dropped pressure is being set as a first pressure for the second pressure to be determined from; wherein the controlled wheel is a rear wheel or an opposite front wheel. Hartman further discusses the

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relationship between controlling the pressures of the valves in column 4, lines 40-59.

Hartman discusses controlling the pressures of the front brakes from right to left in the Abstract. In the body of the patent, Hartman further discusses the controlling of the pressure of the rear in comparison to the front. In other words, the valves are being adjusted in relationship with one another or the second pressure is adjusted according to a first pressure in the same manner as Applicant. All of these adjusted pressures are desirable because they are adjusted to provide stability to the vehicle on a slip road.

Hartmann lacks the concept of employing a differential pressure in the first intake valve and in the second intake valve in the controlling device. Schubert teaches the concept of employing a differential pressure in an intake valve in a controlling device instead of using pressure values in order to increase accuracy in a pressure controlling method in column 1, lines 47-end. Schubert further shows the characteristics curves in figures 6a and 6b, for differential pressure in relationship with current in order to determine the current from the differential pressure and vice versa. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified

Hartmann's device to employ the differential pressure of an intake valve in a controlling device as taught by Schubert instead of using pressure values in order to increase accuracy in a pressure controlling method. As modified, Hartmann's device would be employing characteristic curves as taught by Schubert for the first and the second intake valves in order to increase accuracy in the controlling method in the same manner for both valves. As such, the current of each valve can be determined from the characteristics curves as shown by Schubert. Schubert also shows in column 1, lines

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47-54 that the currents are activation currents for outputting signals to generate pressures as shown in figure 3.

Re: claims 25 and 26, Schubert further shows that the intake valve is a differential-pressure regulating valve and that the valve is control by a characteristic curve of differential pressure versus current. As modified by Schubert, Hartmann's device would comprise first and second the intake valves to be differential-pressure regulating valves and that the valves would be controlled by characteristic curves of differential pressure versus current as taught by Schubert in figures 6a and 6b in order to improve accuracy.

Re: claims 27 and 29-40, Schubert teaches all the combinations of the pressures versus the currents in the characteristic curves as shown in figures 6a and 6b. Hartman shows that the valves are solenoid valves wherein the valves are activated to control a yawing moment in the Abstract and the wheels 50, 50 (with valves 5a, 5b) are in the same axle as shown in figure 1 of Hartman.

(10) Response to Argument

In page 9 of the Brief, Appellant argues that Hartmann does not set the brake pressure in a first wheel and then set the brake pressure in the second wheel based on the pressure of the first wheel.

The Examiner maintains that Hartmann sets a first pressure for a first wheel as stated in column 2, line 34, "Starting from a beginning value when the brakes are applied". Then, Hartmann explains in column 3, lines 26-38 that because a slip

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condition is detected (i.e. a sharp pressure drop), the pressure for the rear wheel is adjusted accordingly (i.e. setting the second pressure of the second wheel according to the pressure of the first wheel). It would not be possible for any brake system to not set a first value. The first value is considered to be at the start of a braking operation when the controller sends a signal to commence braking of the wheel. In order to brake the rotation of a wheel, a first hydraulic pressure is generated. Hartmann shows clearly that a first pressure is set for the front wheel during a controlled braking and when a pressure drop is detected, a second pressure is set for the rear wheel accordingly.

In page 10 of the Brief, Appellant argues that Hartmann does not show a predesignation; and determining a desired second pressure differential.

The Examiner is unsure of the argument about Hartmann does not show a pre-designation. Through out the text of Hartmann, Hartmann discusses setting the brake pressures of the front wheel and the brake pressure of the rear wheel, etc. The pre-designation is the front wheel would be a regulated wheel and the rear wheel would be a controlled wheel. It is true that Hartmann does not employ these terms “regulated, controlled”. However, the pre-designation between the front and the rear wheel is apparent through out the text of Hartmann. One would understand that the front wheel has been pre-designated as a regulated wheel and the rear wheel has been pre-designated as a controlled wheel in the same manner as Appellant’s; since the rear wheel brake pressure is being set after and according to the brake pressure of the front wheel.

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Appellant also argues that Schubert does not teach “a desired second pressure differential”. It is reminded that Hartmann teaches “a desired second pressure” in that the second pressure would help the vehicle avoid a dangerous yawing moment. Schubert was relied upon to teach the use of a pressure differential value instead of a pressure value.

In page 11 of the Brief, Appellant argues that the Examiner never provided an affidavit because the 103 rejection appears to be based on personal knowledge; and an “obvious to try” standard.

Again, the Examiner is at a lost of these two arguments. Reviewing the Final Office Action dated 12/02/2009 shows no statement of “The Examiner taking an Official Notice” or “It would have been obvious to try”. The 103 rejection is based on two factual documents: a patent to Hartmann and a patent to Schubert. The rejection shows elements of Hartmann that meet the claimed features of the instant application. When Hartmann lacks a feature of using differential pressure, Schubert is cited to teach this concept. The combination of Hartmann in view of Schubert is clearly communicated to the Appellant in the Final Rejection dated 12/02/09.

In page 12 of the Brief, Appellant argues that the rejection is based on hindsight.

In response to Appellant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

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hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As stated above, the reasons to combine Hartmann and Schubert has been set forth above and in the Final Rejection dated 12/02/09.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Xuan Lan Nguyen/ 8/4/10

Conferees:

Xuan Lan Nguyen /XLN/

Bradley King /BK/

Marc Jimenez /MJ/